

### **REMARKS/ARGUMENTS**

The Applicants originally submitted Claims 1-21 in the application. Previously, the Applicants amended Claims 1, 5, 7-8, 12, 14-15 and 21. In the present response, the Applicants have again amended independent Claims 1, 8 and 15. No claims have been added or cancelled. Accordingly, Claims 1-21 are pending in the application.

#### **I. Rejection of Claims 1-21 under 35 U.S.C. §112**

The Examiner has rejected Claims 1-21 under the first paragraph of 35 U.S.C. §112 for not being enabled. Specifically, the Examiner asserts that the present invention does not enable a multidimensional charge variation function that is independent of a conductive geometry of a structure. (Examiner's Action, page 3). The Applicants respectfully disagree but have amended the claims, the specification and Figure 2B to clearly delineate the invention and more clearly provide enablement thereof for one skilled in the art. The amendments do not constitute new matter but include subject matter included in the originally filed application. Accordingly, the Applicants respectfully request the Examiner withdraw the §112, first paragraph rejection and issue allowance for Claims 1-21.

#### **II. Rejection of Claims 1 and 8 under 35 U.S.C. §102**

The Examiner has rejected Claims 1 and 8 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,397,171 to Belk. The Examiner does not assert that Belk teaches a charge variation function that is independent of a conductive geometry but asserts, based on the §112, first paragraph, rejection that Belk does teach a charge variation function that is derived from the conductive

geometry. (Examiner's Action, page 3). As argued previously and in conjunction with the above amendments, the Applicants respectfully disagree and assert that Belk does not teach each and every element of independent Claims 1 and 8.

Belk does not teach, among other things, a system for generating a representation of charge distribution for a given capacitive structure including a charge variation function generator that creates a multidimensional charge variation function that is independent of a conductive geometry of the structure and an associated conductive geometry generator associated with the charge variation generator, that creates a representative conductive geometry, wherein the charge variation function is projected on the representative conductive geometry to provide the representation and the charge variation function and the representative conductive geometry are employable in an integral equation formulation to reduce a complexity thereof. (Claims 1 and 8). Belk teaches modeling metalization structures by selecting representative sub units and using the self and mutual interactions of the sub units as an initial solution to describe all interactions between similar metalization sub units in an overall system of metals. (Abstract). The sub units are a system of structures including straight polygons, bends and intersections which are decomposed from the metalization structure. (Column 6, lines 21). The charge distribution functions on each subunit may be decomposed into mathematical functions that capture the differing properties of the components of the charge distributions. (Column 12, lines 31-37). The charge distributions, therefore, are dependent on a conductive geometry of the metalization structure since the charge distribution are dependent on subunits which are decomposed structures from the metalization structure.

This differs from the present invention where the charge distribution is represented by a charge variation function projected on a representative conductive geometry. (Claims 1 and 8). In

fact, neither the charge distribution nor the charge variation function that modifies the charge distribution to reach a desired solution is dependent on the conductive geometry of a capacitive structure. Instead, the charge variation may be generated by employing equations 10-16 of the specification whereas the charge distribution may be generated by employing equation 17 of the specification.

Since Belk does not teach creating a multidimensional charge variation function that is independent of a conductive geometry of the capacitive structure, Belk, therefore, does not disclose each and every element of the claimed invention associated with independent Claims 1 and 8. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102(e) rejection with respect to Claims 1 and 8.

### **III. Rejection of Claims 2-7 and 9-21 under 35 U.S.C. §103**

The Examiner has rejected Claims 2-7 and 19-21 under 35 U.S.C. §103(a) as being unpatentable over Belk in view of U.S. Patent 6,175,815 to Statzler, a journal article written by K. Nabors (Nabors), U.S. Patent 6,345,235 to Edgecomb, *et al.* (Edgecomb), U.S. Patent 6,351,572 to Dufour or a combination of thereof. The Applicants respectfully disagree and reassert the following arguments.

Regarding independent Claim 15, the Examiner has asserted that Belk and Nabors teach or suggest each and every element thereof. (Examiner's Action, page 7). As discussed above, Belk does not teach creating a multidimensional charge variation function that is independent of a conductive geometry of the capacitive structure as recited in independent Claims 1 and 8. Since Claim 15 has analogous claim limitations as in Claims 1 and 8, Belk also fails to teach the

Applicants' claimed invention as recited in Claim 15. Additionally, Belk does not suggest creating a multidimensional charge variation function that is independent of a conductive geometry of the capacitive structure. In contrast, Belk merely teaches determining charge distribution by decomposing a metalization structure into subunits.

Nabors does not cure the deficiencies of Belk since Nabors does not teach or suggest creating a multidimensional charge variation function that is independent of a conductive geometry of the capacitive structure. Instead, Nabors has merely been cited by the Examiner to teach integral equations. (Examiner's Action, page 7). Thus, the combination of Belk and Nabors does not teach or suggest each and every element of independent Claim 15 and does not present a *prima facie* case of obviousness thereof. The combination of Belk and Nabors, therefore, does not render Claim 15 unpatentable.

As discussed above, Belk fails to teach or suggest all of the elements of the inventions recited in independent Claims 1 and 8. Additionally, Belk and Nabors fail to teach or suggest all of the elements of the invention recited in independent Claim 15. Furthermore, Statzler, Edgecomb and Dufour also fail to teach or suggest creating a multidimensional charge variation function that is independent of a conductive geometry of the capacitive structure. Instead, each of these references have been cited by the Examiner to teach an element of a specific dependent claim. (Examiner's Action, pages 5-10). Since Statzler, Edgecomb and Dufour fail to cure the deficiencies of Belk and Nabors, the Examiner cannot establish a *prima facie* case of obviousness of dependent Claims 2-7, 9-14 and 16-21, which include the elements of the respective independent claims. Therefore, the inventions as stated in Claims 2-7 and 9-21 are not obvious over Belk in view of Statzler, Nabors, Edgecomb and Dufour since Belk, Statzler, Nabors, Edgecomb and Dufour, individually or in

combination with one another, do not teach or suggest all of the claim elements. Accordingly, the Applicants respectfully request the Examiner withdraw the 103(a) rejection and pass Claims 2-7 and 9-21 to issue.

#### **IV. Conclusion**

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 1-21. The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

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